



14538A-45-1.ST25.txt  
SEQUENCE LISTING

<110> ROBERTS, James A.  
KELLY, Beth L.

<120> METHODS FOR INCREASING PLANT CELL PROLIFERATION BY FUNCTIONALLY INHIBITING  
A PLANT CYCLIN INHIBITOR GENE

<130> 14538A-45-1

<140> 09/980,758

<141> 2001-11-13

<150> PCT/US00/13379

<151> 2000-05-15

<150> US 60/134,373

<151> 1999-05-14

<160> 22

<170> PatentIn version 3.1

<210> 1

<211> 408

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<213> Arabidopsis thaliana

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tctacatcta ctattgtctc tacatgttct tcttcatcaa cgactttgtc ttctcctcta 180  
gacacaatct actctgttcc ctctccatcc ccagcagcgg tgctgacgtc accaggcgg 240  
tgttgtaccc cgaaagccaa gaagtctagg ataccggaga tgctgacgtg tccaccggcg 300  
ccgaagaagc aaagggtctc gaaaaactgt gtgttacgac ggagacagat cgttttcttt 360

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&lt;211&gt; 135

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 2

Met Ala Ser Lys Lys Ala Arg Lys Pro Asn Arg Ala Glu Lys Lys Leu  
1 5 10 15Thr Arg Ser Cys Phe Lys Lys Gln Val Pro Gln His Asn Asn Ile Asn  
20 25 30Thr Ser Ile Thr Leu Asp Gln Thr Ser Thr Ser Thr Ile Val Ser Thr  
35 40 45Cys Ser Ser Ser Ser Thr Thr Leu Ser Ser Pro Leu Asp Thr Ile Tyr  
50 55 60Ser Val Pro Ser Pro Ser Pro Ala Ala Val Leu Thr Ser Pro Gly Gly  
65 70 75 80Cys Cys Thr Pro Lys Ala Lys Lys Ser Arg Ile Pro Glu Met Leu Thr  
85 90 95Cys Pro Pro Ala Pro Lys Lys Gln Arg Val Ser Lys Asn Cys Val Leu  
100 105 110Arg Arg Arg Gln Ile Val Phe Phe Ala Pro Pro Glu Ile Glu Leu Phe  
115 120 125Phe Val Asn Ala His Asp Arg  
130 135

&lt;210&gt; 3

&lt;211&gt; 639

&lt;212&gt; DNA

&lt;213&gt; Arabidopsis thaliana

&lt;400&gt; 3

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ccaaaacctc aaaaacaaag aaggacgaag gtgatgacga cgaagatgac ctccgctgca 180

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gcacaccac atcccaagaa cacaagattc ccgccgtcgt agactctcca cctcctccgc	240
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cgtgcaagag gaagctttta gtgtcgactt gtgagataat catgaatcgg gaagagattg	360
accgtttctt ctctccgtc tacaatgaga cgtcgactac ggctaaacgg cggagaagtt	420
acccttattg ttctcgaaga tgaggcttaa ttcaatattt acattttttt acagttttac	480
tggaaatatt gtgaaattaa ttatctgttg gtgttcgggt ttaaataattt ttaatttaat	540
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<222> (175)..(175)

<223> Xaa = any amino acid

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&lt;222&gt; (182)..(182)

&lt;223&gt; Xaa = any amino acid

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (205)..(205)

&lt;223&gt; Xaa = any amino acid

&lt;400&gt; 4

Pro Arg Asp Leu Pro Lys Lys Phe Pro Lys Lys Thr Lys Thr Tyr Thr  
 1 5 10 15

Ser Leu Asp Met Asp Leu Glu Leu Leu Gln Asp Leu Ser Lys Phe Asn  
 20 25 30

Phe Pro Thr Pro Ile Lys Ile Arg Ser Lys Thr Ser Lys Thr Lys Lys  
 35 40 45

Asp Glu Gly Asp Asp Asp Glu Asp Asp Leu Arg Cys Ser Thr Pro Thr  
 50 55 60

Ser Gln Glu His Lys Ile Pro Ala Val Val Asp Ser Pro Pro Pro Pro  
 65 70 75 80

Pro Arg Lys Pro Arg Pro Pro Pro Ser Ala Pro Ser Ala Thr Ala Ala  
 85 90 95

Leu Met Ile Arg Ser Cys Lys Arg Lys Leu Leu Val Ser Thr Cys Glu  
 100 105 110

Ile Ile Met Asn Arg Glu Glu Ile Asp Arg Phe Phe Ser Ser Val Tyr  
 115 120 125

Asn Glu Thr Ser Thr Thr Ala Lys Arg Arg Arg Ser Tyr Pro Tyr Cys  
 130 135 140

Ser Arg Arg Xaa Gly Leu Ile Gln Tyr Leu His Phe Phe Thr Val Leu  
 145 150 155 160

Leu Glu Ile Leu Xaa Asn Xaa Leu Ser Val Gly Val Arg Phe Xaa Ile  
 165 170 175

Phe Leu Ile Glx Leu Xaa Ile Trp Met Asp Asn Phe Leu Gln Pro Arg  
 180 185 190

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Ile Leu Ile Ser His Gly Gly Val Asp Val Val Asn Xaa Val Ile Asn  
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Glu Gly Lys Ser Arg  
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<213> Arabidopsis thaliana

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 tacaggcgac gaatcgcggt ggaattgtgg cgagaaattc agcaggagcg tcggagacga 180  
 gtgttgttat agtacgacgg cgagattctc ctccggttga agaacagtgt caaatcgaag 240  
 aagaagattc gtcggtttcg tgttgttcta catcggaaga gaaatcgaaa cggagaatcg 300  
 aatttgtaga tcttgaggaa aataacggtg acgatcgtga aacagaaacg tcgtggattt 360  
 acgatgattt gaataagagt gaggaatcga tgaacatgga ttcttcttcg gtggctgttg 420  
 aagatgtaga gtctcgccgc aggttaagga agagtctcca tgagacggtg aaggaagctg 480  
 agttagaaga cttttttcag gtggcggaga aagatcttcg gaataagttg ttggaatggt 540  
 ctatgaagta taacttcgat ttcgagaaag atgagccact tggaggagga agatacgagt 600  
 gggttaaatt gaatccatga agaagacgat gatgataatg atgatcattg ttttcaccaa 660  
 agtacttatt atttctcttc tgtaataatc ttgctttga ttttctttt aacaaaatcc 720  
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<213> Arabidopsis thaliana

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<222> (203)..(203)

<223> Xaa = any amino acid

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Arg Arg Lys Met Glu Glu Glu Val Asp Leu Val Glu Ser Arg Ile Ile  
20 25 30  
Leu Ser Pro Cys Val Gln Ala Thr Asn Arg Gly Gly Ile Val Ala Arg  
35 40 45  
Asn Ser Ala Gly Ala Ser Glu Thr Ser Val Val Ile Val Arg Arg Arg  
50 55 60  
Asp Ser Pro Pro Val Glu Glu Gln Cys Gln Ile Glu Glu Glu Asp Ser  
65 70 75 80  
Ser Val Ser Cys Cys Ser Thr Ser Glu Glu Lys Ser Lys Arg Arg Ile  
85 90 95  
Glu Phe Val Asp Leu Glu Glu Asn Asn Gly Asp Asp Arg Glu Thr Glu  
100 105 110  
Thr Ser Trp Ile Tyr Asp Asp Leu Asn Lys Ser Glu Glu Ser Met Asn  
115 120 125  
Met Asp Ser Ser Ser Val Ala Val Glu Asp Val Glu Ser Arg Arg Arg  
130 135 140  
Leu Arg Lys Ser Leu His Glu Thr Val Lys Glu Ala Glu Leu Glu Asp  
145 150 155 160  
Phe Phe Gln Val Ala Glu Lys Asp Leu Arg Asn Lys Leu Leu Glu Cys  
165 170 175  
Ser Met Lys Tyr Asn Phe Asp Phe Glu Lys Asp Glu Pro Leu Gly Gly  
180 185 190  
Gly Arg Tyr Glu Trp Val Lys Leu Asn Pro Xaa  
195 200

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60

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 cttcgtcggc ggcttttagcg tctgatgaat gttccgttac catcgggtgga gaagaaagtg 240  
 atcagtcctc gagtatcagc tccggttggt tcaccagtga atcgaaagaa atcgcggaaga 300  
 acagttcgtc gtttggtgta gatctggagg atcatcaaat cgaaaccgaa accgaaacct 360  
 caacattcat caccagcaat ttcagaaaag agacgagtcc agtgagtgag ggtttgggag 420  
 aaacgacaac agaaatggaa tcatcatcgg caacgaagag aaaacaaccg ggggtgagga 480  
 agactccaac ggcggcggag attgaggatt tgttctcgga gctagagagt ccagacgata 540  
 agaagaagca attcatagaa aagtacaact tcgatattgt caatgacgaa ccgcttgaag 600  
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 1 5 10 15

Lys Arg Glu Leu Ala Glu Glu Ala Ser Ser Thr Ser Phe Ser Pro Leu  
 20 25 30

Lys Lys Thr Lys Leu Asn Asp Ser Ser Asp Ser Ser Pro Asp Ser His  
 35 40 45

Asp Val Ile Val Phe Ala Val Ser Ser Ser Ser Val Ala Ser Ser Ala  
 50 55 60

Ala Leu Ala Ser Asp Glu Cys Ser Val Thr Ile Gly Gly Glu Glu Ser  
 65 70 75 80

Asp Gln Ser Ser Ser Ile Ser Ser Gly Cys Phe Thr Ser Glu Ser Lys  
 85 90 95

Glu Ile Ala Lys Asn Ser Ser Ser Phe Gly Val Asp Leu Glu Asp His  
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100

105

110

Gln Ile Glu Thr Glu Thr Glu Thr Ser Thr Phe Ile Thr Ser Asn Phe  
           115                          120                          125  
 Arg Lys Glu Thr Ser Pro Val Ser Glu Gly Leu Gly Glu Thr Thr Thr  
       130                          135                          140  
 Glu Met Glu Ser Ser Ser Ala Thr Lys Arg Lys Gln Pro Gly Val Arg  
   145                          150                          155                          160  
 Lys Thr Pro Thr Ala Ala Glu Ile Glu Asp Leu Phe Ser Glu Leu Glu  
                           165                          170                          175  
 Ser Pro Asp Asp Lys Lys Lys Gln Phe Ile Glu Lys Tyr Asn Phe Asp  
                           180                          185                          190  
 Ile Val Asn Asp Glu Pro Leu Glu Gly Arg Tyr Lys Trp Asp Arg Leu  
           195                          200                          205

Xaa

&lt;210&gt; 9

&lt;211&gt; 6

&lt;212&gt; PRT

&lt;213&gt; Arabidopsis thaliana

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (2)..(2)

&lt;223&gt; Xaa = Leu, Ile or another hydrophobic amino acid

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (3)..(3)

&lt;223&gt; Xaa = Glu or Asp

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (4)..(4)

&lt;223&gt; Xaa = Leu, Arg, Asp or any other amino acid residue



<220>

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<222> (5)..(5)

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<223> Xaa = Glu or Lys

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<222> (13)..(13)

<223> Xaa = Gly or Glu

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<222> (14)..(14)

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<222> (18)..(18)

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<223> Xaa = Val or Asp

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<223> Xaa = Asn or Glu

<400> 10

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Tyr Xaa Trp Xaa Xaa Leu Xaa  
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